คุณภาพการบริการท่าอากาศยานจากมุมมองของผู้โดยสาร: กรณีศึกษาท่าอากาศยานสุวรรณภูมิ**

Suvarnabhumi Airport's Service Quality from the Passengers' Perspective**

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บทคัดย่อ

งานวิจัยในครั้งนี้มีวัตถุประสงค์คือ (1) เพื่อศึกษาปัจจัยในการบริการท่าอากาศยานที่ผู้โดยสารเห็นว่ามีความสำคัญ (2) เพื่อศึกษาปัจจัยในการบริการท่าอากาศยานที่ผู้โดยสารเห็นว่าควรมีการปรับปรุง และ (3) เพื่อสำรวจความพึงพอใจของผู้โดยสารต่อคุณภาพการบริการของท่าอากาศยานสุวรรณภูมิ การศึกษานี้เก็บรวบรวมข้อมูลโดยใช้แบบสอบถามต่อปัจจัยในการบริการท่าอากาศยานทั้งหมด 35 ข้อคำถามซึ่งปรับมาจากโปรแกรมคุณภาพการบริการท่าอากาศยาน (Airport Service Quality Program) ของสมาคมท่าอากาศยานระหว่างประเทศ (Airport Council International หรือ ACI) และจากงานวิจัยเรื่องความคาดหวังของผู้โดยสารต่อคุณภาพการบริการท่าอากาศยานของฟอดเนสและเมอเร่ย์ (Fodness & Murrey, 2007) ผู้วิจัยได้ทำการแจกแบบสอบถามจำนวน 400 ชุดให้กับกลุ่มตัวอย่างแบ่งออกเป็นผู้โดยสารขาเข้าจำนวน 200 ชุด และผู้โดยสารขาออกจำนวน 200 ชุด โดยการสุ่มตัวอย่างแบบไม่อาศัยความน่าจะเป็น การวิเคราะห์ข้อมูลที่ได้โดยการใช้สถิติเชิงพรรณนาร่วมกับการใช้เทคนิค (Importance-performance Analysis หรือ IPA) จากผลการวิเคราะห์ข้อมูลพบว่าผู้ตอบแบบสอบถามส่วนใหญ่เห็นว่าปัจจัยในการบริการจาก 35 ข้อคำถามนั้นอยู่ในระดับความสำคัญมีเพียงบางปัจจัยเท่านั้นที่อยู่ในระดับปานกลางคือ การมีที่จอดรถไว้บริการ ความคุ้มค่าของราคาที่จอดรถ และการมีห้องรับรองไว้คอยบริการ สำหรับความพึงพอใจต่อคุณภาพการบริการท่าอากาศยานโดยรวมอยู่ในเกณฑ์ปานกลาง และข้อเสนอแนะในการปรับปรุง กลุ่มตัวอย่างเห็นว่าท่าอากาศยานควรปรับปรุงคุณภาพการบริการในด้านการจัดให้มีบริการระบบอินเตอร์เน็ตไร้สาย การจัดให้มีป้ายบอกทิศทางในอาคารเพื่อง่ายต่อการหาทาง และระยะการเดินใน

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**งานวิจัยเรื่องนี้ได้รับการสนับสนุนวิจัยจากมหาวิทยาลัยราชภัฏสวนสุนันทา

อาคารผู้โดยสารไกล เมื่อนำผลการประมวลเปรียบเทียบระหว่างกลุ่มตัวอย่างที่เดินทางมาจากทวีปที่ต่างกัน พบว่าไม่มีข้อแตกต่างกัน และผลจากการประมวลทางสถิติกับผลจากกราฟ IPA มีความเหมือนกัน กลุ่มตัวอย่างจำนวน 47.19 เปอร์เซ็นต์ที่ตอบข้อคำถามว่าจะแนะนำเพื่อนหรือญาติมาใช้บริการท่าอากาศยานสุวรรณภูมิหรือไม่ พบว่า 23.72 เปอร์เซ็นต์ ให้ความเห็นว่าจะแนะนำเพื่อนและญาติมาใช้บริการท่าอากาศยานสุวรรณภูมิอย่างแน่นอน ข้อจำกัดจากงานวิจัยในครั้งนี้คือการที่ไม่สามารถเข้าไปเก็บข้อมูลจากผู้โดยสารเปลี่ยนเครื่อง (Transit) ที่อยู่ในตัวอาคารได้เนื่องจากเหตุผลทางด้านความปลอดภัยและเป็นพื้นที่หวงห้ามเฉพาะ สำหรับข้อแนะนำท่าอากาศยานควรมีการปรับปรุงปัจจัยในการบริการทั้งที่เป็นรูปธรรมและนามธรรมรวมทั้งบุคลากรและเทคโนโลยีด้วย

คำสำคัญ: ท่าอากาศยาน ความพึงพอใจของผู้โดยสาร คุณสมบัติการบริการ คุณภาพการบริการ

Abstract

The purposes of this study are (1) to determine the service factors that are important to passengers, (2) to determine the airport service attributes that require improvement and (3) to survey the passenger's satisfaction with Suvarnabhumi International Airport service quality. The data in this study were collected by using questionnaires consisting of thirty-five key airport service attributes, which was adapted from the Airport Service Quality (ASQ) program undertaken by the Airport Council International (ACI) (Graham, 2008) and the passengers' expectations of airport service quality researched by (Fodness & Murray, 2007). The survey questionnaires were distributed to 200 departing passengers and 200 arriving passengers by applying a convenient sampling method. Descriptive statistics and the Importance-Performance Analysis (IPA) technique were employed. The results revealed that most of the service attributes were important to the respondents, with the exceptions of parking facilities, value for money of parking, and availability of lounges. Meanwhile, the levels of satisfaction on overall airport performance were average. The issues that respondents suggested to improve airport service quality are providing internet service/WIFI, clarity of directions, and the walking distance inside the terminal. The results comparing respondents from different continents were not significant. The comparison between statistical analysis and IPA results on passengers' satisfaction demonstrate an association. Incidentally, 23.72 per cent of the respondents indicated that they would definitely recommend their friends and relatives to use Suvarnabhumi International Airport.

However, this study was unable to survey transit passengers due to security reasons and restricted area policies. The considerations for improving tangible and intangible service attributes, including workforce and technology to support the service delivery, are recommended.

Keywords: Airport, Passenger Satisfaction, Service Attributes, Service Quality

Introduction

The airport is the place where air travelers, baggage and cargo change modes of transportation from air to ground and ground to air. The airport represents a country's arts and culture provokes the first impression or, in some cases, dissatisfaction to the user. Many countries want their airports to become a hub. The primary factors that determine the suitability of being a hub airport are having good facilities, and courteous service personnel with quality service attributes; size is not a relevant factor. Airport marketers strive to meet the needs of customers by differentiating themselves in order to gain a competitive advantage (Fodness & Murray, 2007). Nevertheless, air travelers have different needs depending on the groups of passenger, for instance departing, arriving, and transferring passengers and the facilities they intend to use (Park & Jung, 2011). Moreover, it can clearly be seen that the passengers are coming from different countries and cultures, which is not easy to recognize and respond to their needs. For a better understanding of the airport user, this paper surveyed both departing and arriving passengers' service experience of Suvarnabhumi Airport. This investigation was designed to identify the airport service attributes that are important from passengers' viewpoints, what service attributes are required for improvement, and to assess the level of satisfaction.

Objectives

The objectives of this study are:

1. To determine the service factors that are important to passengers.
2. To determine the airport service attributes that require improvement.
3. To survey the passenger's satisfaction with Suvarnabhumi International Airport service quality.

Conceptual Framework

Thailand has promoted its Bangkok Suvarnabhumi Airport as having a geographical advantage to be the Southeast Asian regional aviation hub (Seyanon, 2012). Being a hub airport confers significant advantages such as improved density of passengers and cargo flow and the level of flight connectivity both domestically and internationally which impact the country's economy (Bowen, 2000). Suvarnabhumi International airport started its operation on September 28, 2006 with a two runway capacity capable of accommodating 76 flights per hour, 45 million passengers and 3 million tons of cargo per year. Seyanon (2012) stated that the airport has tremendous challenges to maintain passenger satisfaction. Besides this, management teams were well aware of airport service quality since it has a positive influence on overall passenger satisfaction. Chowhadry & Prakash (2007) also found that service quality was a key to success in today's competitive business environment. The airport, Graham (2008) pointed out, is crucial in evaluating the quality of service attributes. There are some factors concerned in measuring the airport's service quality which could affect passenger perceptions such as fluctuating demand and the activities and responsibilities of the airport in some specific areas. The Airports Council International (ACI), hence, identified airport service quality into four key areas of passenger satisfaction that need to be evaluated: the experience of coming to the airport, passenger processing, and commercial services and physical facilities. ACI later produced a new survey in cooperation with IATA called Airport Service Quality (ASQ) which investigated 34 key service attributes. Whilst Fodness and Murray (2007) have developed a conceptual model of airport service quality into three keys dimensions: function, interaction, and diversion. The function consists of effectiveness and efficiency where interactions are concerned with service personnel and diversion with maintenance, décor and productivity. Lubbe, Douglas & Zambellis (2011) have applied Fodness & Murray's hierarchy model on their study in South Africa, O.R. Tambo International Airport. They found that there were differences in perception of the importance of airport service attributes between leisure and business travelers, and frequent and infrequent travelers. Sohail & Al-Gahtani (2005) revealed that King Fahd International Airport users evaluated airport attributes on flight information, guidance in the airport, cleanliness, parking space and check-in facilities as below their expectation. Whereas, Gkritza, Niemeier, and Mannering (2006) found that airport security screening affected passenger satisfaction. The process of airport screening

by the airport operator should be considered carefully. Facilities for disabled persons need to be considered by airlines and airports. Chang & Chen (2012) identified the top three factors on airport affecting the facilities and services as distance between parking lot and terminal, barrier-free lifts and barrier-free ramps. Their recommendations were to provide a seamless journey and proper assistance to impaired persons, get staff trained and well briefed with their responsibilities and to provide for the needs of disabled passengers. Another attribute that the airport should consider is the mode of access. Tam, Tam and Lam (2005) analyzed Hong Kong's airport access mode choices for passengers. They found that the level of departing passengers' satisfaction was lower than passenger expectations in 5 areas: walking distance to/from stations, waiting time, in-vehicle travel time, travel time reliability, and travel cost. In order to become a hub airport in the South East Asia region and represent the country's image and to attract travelers, an understanding of passenger requirements is crucial. Thus, this study was conducted to highlight areas for improvement as well as share knowledge to students studying the airport management course.

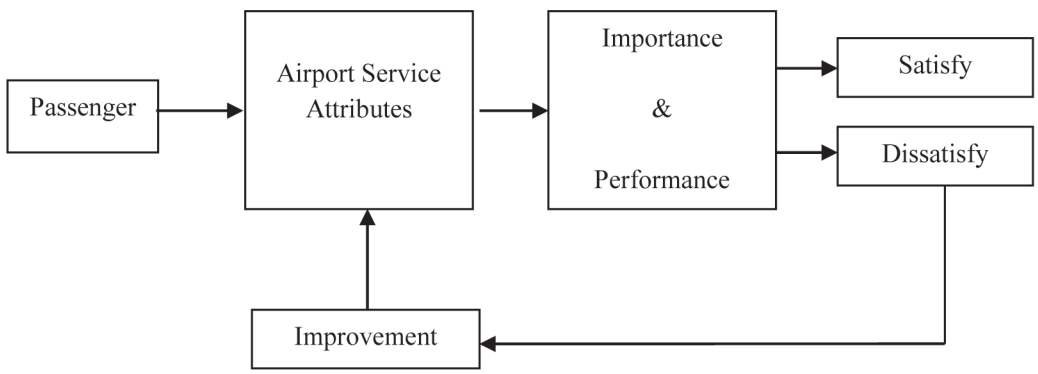

Figure 1 Conceptual Framework

Research Methodology

1. Sample. The sample of this study consisted of passengers with experience of the Suvarnabhumi International Airport. In reference to 2012 airport statistics, there were 53 million passengers. According to Yamane, the sample size was 400 samples at 95 percent of reliability and 5 percent of variance respectively.

2. Data. The data were collected by using questionnaires. The questionnaire was composed of 4 parts: the first part was demographic information of respondents including sex, age, education, occupation, nationality and purpose of flying; the second and third parts were concerned with the airport service attributes that passengers feel are important and performance of the airport. The questions on the second and third parts consisted of 35 key questions adapted from Airports Council International (ACI); the second part focused on the level of importance while the third part focused on performance. The last part of the questionnaire was an open-ended question for passengers' recommendations. Then, the questionnaires' reliability was assessed by using Cronbach's Alpha test. The resulting reliability value was shown to be between 0.70-1.00. Afterwards, the questionnaires were administered to 200 departing passengers and 200 arriving passengers at Suvarnabhumi International Airport by applying non-probability sampling.

3. Data Analysis. The descriptive statistics (frequency, percentage, mean, and standard deviation) were used to analyze the data. One-way Anova was implemented to compare the degree of differences among the passenger who came from different parts of the world. Meanwhile the SPSS was employed to evaluate the level of importance and satisfaction from the following 5-point Likert's Scale:

5 means extremely important and excellent in performance
4 means important and good performance
3 means moderately important and fair performance
2 means unimportant and poor performance
1 means extremely unimportant and very poor performance

The class interval is 0.80, and the score ranges are as follows:

4.21-5.00 means the level of important and satisfactions are very high
3.41-4.20 means the level of important and satisfactions are high
2.61-3.40 means the level of important and satisfactions are moderate
1.81-2.60 means the level of important and satisfactions are low
1.00-1.80 means the level of important and satisfactions are very low

In addition, the IPA (Importance-Performance Analysis) technique was applied. This technique, introduced by Martilla & James (1977), allows for a consumer evaluation to determine which aspect of marketing requires more attention from an organization.

Hence, the management could interpret the data and develop marketing strategies. There are four quadrants of the importance-performance grid and can be interpreted as follows:

Quadrant I Concentrate here means that passenger feel the service attributes are important but the observed performance is low; it indicates low satisfaction. Rating scores of importance are between 3.41-5.00, and performance rating scores are between 1.00-3.39.

Quadrant II Keep up with good work means that passenger is pleased with the performance. Rating scores of importance are between 3.41-5.00, and performance rating scores are between 3.41-5.00.

Quadrant III Low priority means that the passenger did not perceive the service attributes to be important, and the performance of the firm is low. Rating scores of importance are between 1.00-3.39, and performance rating scores are between 1.00-3.39.

Quadrant IV Possible overkill means that the firm performed quite well but the passenger perceived service attributes as only slightly important to them. Rating scores of importance are between 1.00-3.39, and performance rating scores are between 3.41-5.00.

Results

There were 392 respondents, the majority were males between 21-30 years old whose purpose of travel was leisure as shown in Table 1.

Table 1 Illustrates the respondents' data including gender, age and purpose of travel.

Respondent	Number	Percentage
Male	197	50.26
Female	194	49.49
Not indicated	1	0.26

Table 1 (Continued)

Respondent	Number	Percentage
Age		
21-30	180	45.92
31-40	106	27.04
41-50	59	15.05
50	46	11.73
Not indicated	1	0.26
Purpose of Travel		
Business	84	21.21
Leisure	104	26.26
VFR	161	40.66
Others	45	11.36
Total	392	100.00

The majority of respondents were from Europe (43.88%), Asia (35.20%), and North America (9.95%). A graphical division is shown in table 2.

Table 2 Illustrates the respondents' geographical.

Continent	Number	Percentage
Asia	138	35.20
Australia	22	5.61
Europe	172	43.88
Africa	8	2.04
North America	39	9.95
South America	9	2.30
Unknown	4	1.02
Total	392	100.00

Table 3 Illustrates the airport service attributes that are important to respondents and how well the airport performs.

Airport Service Attributes	Level of important			Performance		
	Mean	SD	Level	Mean	SD	Level
1. Ground transportation to/from airport	3.70	1.24	Important	3.04	1.48	Moderate
2. Parking facilities	2.92	1.51	Moderate	2.65	1.54	Moderate
3. Value for money of parking facilities	3.01	1.52	Moderate	2.65	1.54	Moderate
4. Availability of baggage carts/trolleys	3.52	1.26	Important	2.93	1.47	Moderate
5. Waiting time in check-in queue/line	3.76	1.25	Important	2.91	1.51	Moderate

Table 3 (Continued)

Airport Service Attributes	Level of important			Performance		
	Mean	SD	Level	Mean	SD	Level
6. Efficiency of check-in staff	3.78	1.27	Important	2.93	1.51	Moderate
7. Waiting time at passport control	3.86	1.27	Important	3.00	1.48	Moderate
8. Waiting time at security check point	3.86	1.27	Important	2.94	1.47	Moderate
9. Courtesy and helpfulness of passport inspection staff	3.82	1.23	Important	2.93	1.47	Moderate
10. Courtesy and helpfulness of security staff	3.82	1.23	Important	3.02	1.48	Moderate
11. Thoroughness of security inspection	3.63	1.26	Important	2.95	1.49	Moderate
12. Feeling of being safe and secure	3.89	1.25	Important	3.05	1.52	Moderate
13. Ease of finding your way through airport	3.88	1.27	Important	3.00	1.48	Moderate
14. Flight information screens	3.82	1.27	Important	2.98	1.49	Moderate
15. Walking distance inside the terminal	3.63	1.30	Important	2.97	1.50	Moderate
16. Ease of making connection with other flights	3.71	1.30	Important	2.94	1.49	Moderate
17. Courtesy and helpfulness of airport staff	3.83	1.27	Important	2.85	1.49	Moderate
18. Restaurant/Eating facilities	3.60	1.27	Important	2.90	1.53	Moderate
19. Value for money of restaurant/eating facilities	3.60	1.27	Important	2.96	1.50	Moderate
20. Availability of bank/ATM/money exchange facilities	3.71	1.27	Important	2.88	1.47	Moderate
21. Shopping facilities	3.48	1.28	Important	2.88	1.46	Moderate
22. Value for money of shopping facilities	3.46	1.31	Important	2.67	1.60	Moderate
23. Internet access/Wi-Fi	3.69	1.32	Important	2.85	1.51	Moderate
24. Business/Executive lounges	3.32	1.38	Moderate	2.91	1.51	Moderate
25. Availability of washrooms/toilets	3.89	1.25	Important	3.01	1.51	Moderate
26. Cleanliness of washroom/toilets	3.84	1.28	Important	3.05	1.51	Moderate
27.Comfort of waiting/gate areas	3.78	1.21	Important	2.97	1.50	Moderate
28. Cleanliness of airport terminal	3.78	1.23	Important	3.08	1.51	Moderate
29. Ambience of the airport	3.69	1.25	Important	2.98	1.43	Moderate
30. Comfort of departure areas	3.73	1.25	Important	2.98	1.50	Moderate
31. Custom inspection	3.65	1.23	Important	3.00	1.47	Moderate
32. Speed of baggage delivery	3.83	1.23	Important	3.04	1.47	Moderate
33. Temperature within the departure terminal	3.69	1.26	Important	3.03	1.49	Moderate
34. Food quality in food court	3.71	1.22	Important	2.96	1.51	Moderate
35. Overall satisfaction with the airport	3.81	1.23	Important	3.07	1.53	Moderate
Overall result	3.68	0.99	Important	3.04	1.48	Moderate

Table 3 revealed that most of the airport service attributes were important to passengers except parking facilities, value for money of parking facilities and the availability of Business/Executive lounges. The three highest ranked were the feeling of being safe and secure, availability of washrooms/toilets, and the ease of finding your way through the airport. The overall airport performances perceived by passengers were moderate. This means that the airport performance was not as passengers expected.

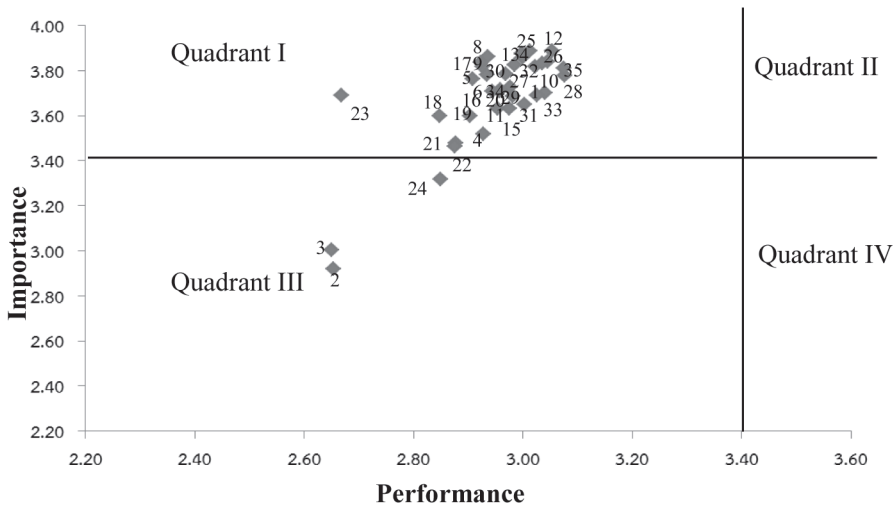

Figure 2 Illustrate the level of importance and airport performance.

From Figure 2, there were three airport service attributes that passengers felt were not important. Those were parking facilities, value for money of parking facilities, and the availability of Business/Executive lounges and these fall in quadrant III. This means that passengers did not care much about those three issues and the satisfaction level was low. Most of the other attributes fell into quadrant I, and it can be interpreted that passengers have high expectations of these airport service attributes but that the airport did not perform well because the level of satisfaction was low. An especially low service attribute was no. 23 (Internet access/Wi-Fi).

Table 4 The variance analysis of importance and performance

Issues	Mean	SD	F	p-value
The level of Importance	3.68	0.99	0.82	0.56
Airport Performance	3.04	1.48	1.20	0.31

From Table 4, the result of the variance analysis on the level of importance and the airport's performance from passenger from different parts of the world demonstrates geographic origin has no significant effect.

Table 5 The number of respondents that would recommend friends/relatives to use Suvarnbhumi Airport.

Recommendation	Number	Percentage
Not at all	4	1.02
Not rarely	7	1.79
Maybe	46	11.73
Yes	93	23.72
Sure	35	8.93
Not indicated	207	52.81
Total	392	100.00

Table 5 shows that only 8.3 percent will surely recommend people they know to use Suvarnabhumi airport and 23.72 percent that will recommend this airport. 52.8 percent did not answer this issue, which may be indicative of dissatisfaction.

Conclusion

As the comparison of level of importance and performance demonstrates, passengers were not satisfied much with the Suvarnabhumi Airport's service attributes. Furthermore, there was one open-ended question; from the 35 issues listed, passengers desired serious improvement for: Internet access/Wi-Fi, ease of navigation inside the terminal, walking distance inside the terminal, the efficiency of check-in staff, and waiting time at passport control. The perception of passengers from different continents had

shown no difference on the level of importance and the performance of the airport. It can clearly be seen that in the IPA graph almost all of the attributes fall in quadrant I. This means the service attributes were important to the passenger, but the airport performance was not adequate.

Recommendation

Suvarnabhumi Airport's management team should examine the process details of all attributes, especially the service attributes that passengers suggest need urgent improvement. The airport should offer free Wi-Fi service or free for some specific amount of time. They should check availability and legibility of signs as well as provide customer service assistance to help passengers inside the terminal for both landside and airside areas. In the meantime, the automatic passenger movement system should be implemented to link between each concourse. In regards to check-in, there should be technology for self-service check-in for passengers with no bags and/or with bags to drop off at the check-in counter. This way passengers can check-in from home or use a mobile phone as a boarding pass. In accordance with this suggestion, the airport must provide a barcode reader machine in order to facilitate the self-service check-in system. Airport management team should evaluate the peak hour of facilities use and lower hour use in order to allocate resources accordingly. Another issue is a continuous training and development program for the airport workforce should be implemented in every level. As Keerativinikul & Taweecheep (2011) stated, knowledge and skill training is essential for the employees effectiveness and efficiency in providing services. The effectiveness of service is derived from well-trained workforces with a service-oriented mind in order to please the customers (Damapong & Taweecheep, 2010). However, the network and collaboration among workforces at all levels push the organization to strive for success (Nichanon, 2013).

For further studies, the author would like to recommend conducting this field of research inside the terminal also called the "airside area", where there are transit or transfer passengers. This would elucidate the factors which passengers find important and require improvement for higher service quality and to be competitive, since the rivalry among our neighbors is getting higher. The airport plays a crucial role in trading and income to the country. As Young & Wells (2011) mentioned, the airport widens trade and commerce, and improves a country's economy. This is consistent with Neufville and

Odoni (2013) who revealed that about $0.5 trillion in revenue was generated due to the growth of the airport industry.

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